



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/564,651

07/13/2006

Michael Vossing

KMG-001

1665

52554 7590 09/25/2009

MONAHAN & MOSES, LLC  
13-B W. WASHINGTON ST.  
GREENVILLE, SC 29601

EXAMINER

LEE, REBECCA Y

ART UNIT

PAPER NUMBER

1793

MAIL DATE

DELIVERY MODE

09/25/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/564,651	<b>Applicant(s)</b> VOSSING ET AL.	
	<b>Examiner</b> REBECCA LEE	<b>Art Unit</b> 1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 July 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 46-78 is/are pending in the application.
- 4a) Of the above claim(s) 46-62, 67, 68 and 73-78 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 63-66 and 69-72 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Election/Restrictions***

Applicant's election with traverse of Group III, claims 63-74 in the reply filed on 07/23/09 is acknowledged. The traversal is on the ground(s) that the amended features of iron(II) sulphate monohydrate in independent claims is a common special technical feature shared by all groups. This is not found persuasive because iron (II) sulphate monohydrate is used to reduce the soluble chromate content in cement is known in the prior art, e.g., US5362321 (Column 9, lines 1-3 and Table 3). As the recited substance does not make a contribution over the prior art, unity is lacking and restriction is proper.

The requirement is still deemed proper and is therefore made FINAL.

Claims 46-62 and 75-78 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to nonelected inventions, claims 67-68 and 73-74 are withdrawn as being drawn to a nonelected specie, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 07/23/09.

### ***Status of Claims***

Claims 1-45 are cancelled. Claims 46-62, 67-68 and 73-78 are withdrawn. Claims 63-66 and 69-72 are pending where claims 63-66 and 69 are amended in view of amendment filed 07/23/09.

***Status of Previous Rejections***

The rejections of claims 63-66 and 69-72 under 35 U.S.C. 103(a) have been withdrawn in view of amendment filed 07/23/09.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 63-66 and 69-72 are rejected under 35 U.S.C. 103(a) as being unpatentable over Larsen (US 5362321) in view of Cody et al. (US 4505886).

Regarding claim 63, Larsen teaches a method of reducing the soluble chromate content in cement comprising mixing the cement with iron(II) sulfate monohydrate (Column 9, lines 1-3, example 3 and table 3).

Even though Larsen does not teach the ferrous sulfate monohydrate is produced by concentrating an iron(II) sulfate monohydrate containing used sulfuric acid, such limitation is considered as a product by process limitation. When the prior art discloses a product substantially the same as that being claimed, the burden falls upon the applicant to show that any process steps associated therewith results in a product materially different from that disclosed in the prior art. See *In re Thorpe*, (227 USPQ 964), *In re Brown*, (173 USPQ 685), *In re Fessman*, (180 USPQ 524) and MPEP 2113. In the instant case, the ferrous sulfate monohydrate of Larsen appears to be identical to

Art Unit: 1793

the claimed, burden is upon applicant to show the recited process in fact results in a materially different product.

Larsen further teach the iron(II) sulfate monohydrate is prepared by drying iron(II) sulfate heptahydrate (Column 9, lines 1-3), but does not teach the claimed particle size or the titanium or manganese content.

Cody et al. teach a process to obtain iron sulfate heptahydrate by crystallizing (precipitating) out iron sulfate heptahydrate from sulfuric acid (Column 4, lines 3-26). Before the crystallization, the ferrous sulfate is 2-25% by weight, titanium 5-25% by weight in the solution; after crystallization, the ferrous sulfate is 0-10% by weight, titanium 5-30% by weight in the solution. One of ordinary skill in the art would have expected the titanium content in the iron sulfate precipitate would be within the claimed range of 5-15% by weight base on iron.

It would have been obvious to one of ordinary skill in the art to use the ferrous sulfate heptahydrate made by Cody et al. in the drying step of Larsen in order to obtain sulfate monohydrate with expected success since Larsen do not require any specific made ferrous sulfate heptahydrate.

In addition, even the combined references do not expressly teach the claimed particle size, since the process of precipitating ferrous sulfate monohydrate as taught by Larsen in view of Cody et al. is significantly similar as claimed, one of ordinary skill in the art would have expected the precipitate of Larsen in view of Cody et al. to have the same or similar size as claimed.

Regarding claim 64, Larsen teaches the ferrous sulfate monohydrate added to the cement is 0.25 or 0.5% (table 3).

Regarding claim 65, Larsen teaches the reducing agent can be milled before adding to the powdered cement (Column 3, lines 32-37).

Regarding to claim 66, since Larsen in view of Cody et al. teach a process of reducing soluble chromate in cement that is significantly similar to the claimed process, one of ordinary skill in the art would have expected the same increasing reducing effect of the iron(II) sulfate-containing reducing agent increases at least temporarily as the storage time increases to be shown by the process of Larsen in view of Cody et al. as claimed.

Claim 69 is rejected mostly for the same reason as stated in the rejection of claim 63 above.

Larsen further teaches ferrous sulfate heptahydrate (green salt) can be used as a chromate reducing agent (Column 9, lines 4-5 and table 3).

It is well held that combining two components each of which is taught by the prior art to be useful for the same purpose is prima facie obviousness MPEP 2144.06. In the instant case, both ferrous sulfate monohydrate and ferrous sulfate heptahydrate can be used as a chromate reducing agent in cement, as taught by Larsen (Column 9, lines 1-5 and table 3). Thus, it would have been obvious to one of ordinary skill in the art to use a combination of ferrous sulfate heptahydrate (green salt) and ferrous sulfate monohydrate in the process of Larsen in view of Cody et al. with expected success.

Claims 70-72 are rejected for the same reasons as applied to claims 64-66 above.

### ***Response to Arguments***

Applicant's arguments with respect to claims 63-66 and 69-72 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's arguments regarding the amended feature of ferrous sulfate monohydrate have been addressed above.

### ***Conclusion***

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Art Unit: 1793

Any inquiry concerning this communication or earlier communications from the examiner should be directed to REBECCA LEE whose telephone number is (571)270-5856. The examiner can normally be reached on Monday-Friday 8:00 am - 5:00 pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ROY KING can be reached on (571)272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/R. L./  
Examiner, Art Unit 1793

/Roy King/  
Supervisory Patent Examiner, Art  
Unit 1793